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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,818	01/28/2000	Mark Alperovich	85134-6200	2697

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WINSTON & STRAWN LLP
1700 K STREET, N.W.
WASHINGTON, DC 20006

EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/493,818

Applicant(s)

ALPEROVICH ET AL.

Examiner

Martin J. Angebrannt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The response provided by the applicant has been read and given careful consideration.

Responses to the arguments offered by the applicant are presented after the first rejection to which they are directed. The amendments to the specification are accepted. The double patenting rejections based upon U.S. Patent No. 6,835,431 or U.S. Patent No. 6,682,799 are withdrawn based upon the proper terminal disclaimers filed 10/11/05.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 21-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The transmittance is measured at the **wavelength of maximum absorption** of the monomer, not the **emission wavelength**. (see specification at page 15/line 5)

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11,12,14,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. '495, in view of Tamura et al. '792 and Huh '588.

Inagaki et al. '495 teaches in example 7, the formation of a recording layer comprising a cyanine dyes together with a quencher. (19/35-20-29). The use of singlet oxygen quenchers to enhance the light fastness of the recording media is disclosed. (13/50-14/48). The use of binders is disclosed including cellulose derivatives, polyvinyl chloride and the like such that the dyes is present in the recording layer in an amount of 0.01-99 %, preferably 1-95%. The concentration of the dye in the coating solution is preferably 0.1-5% (14/42-15/21). The recording layer may be a single layer or a multilayer and the medium may have recording layers coated on both sides of the substrate or two substrate each bearing recording layers may be laminated together. (15/22-27, 16/23-36). The use of plasticizers and the like to the recording layer coating solution is disclosed. (14/61-63).

Tamura et al. '792 teach optical recording media such as example 1-18 which mixes a **cyanine dye (201)** with a polymethine coloring agent coated on a polycarbonate substrate and dried. (1-1 is at column 28 and 1-18 is at column 31). The dye content is 1% in the coating solution. The addition of other dyes, such as cyanine, phthalocyanine, xanthene dyes and stabilizers to the recording layer is disclosed. (25/15-26/26) The use of binders, including ethyl cellulose and nitrocellulose is disclosed. (26/61-65) The addition of plasticizers, surface active agents and the like to improve the film forming properties and stability of the coated film is disclosed. The examiner notes that the dispersants are surfactants (26/66-27/5) The use of various coating methods is disclosed. (27/12-23). The drying of the recording medium is disclosed in the examples. The use of underlayers between the support and the recording layer to protect the substrate from coating solvents and increase adhesion of the recording layer is disclosed. These may be 5-100 nm in thickness. The use of various resins is disclosed,

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including UV curing resins, thermosetting resins, vinyl resins, silicones, silica (silicon dioxide), liquid rubber (latexes) and thermoplastic resins. (27/30-53) Useful coating solvents are disclosed. (26-48) Useful substrates are also disclosed. (25/12-14). The formation of a air sandwich structure where two media are bonded together with an air gap or alternatively bonded directly to each other via a protective layers is disclosed. (27/66-28/7).

Huh '588 teaches optical recording media where the dye/polymer concentration is 1-30% and is optimized based upon the sensitivity (too little and the laser power needs to be too high) and solubility (too much dye is not soluble in the solvent) (3/38-52). The use of cyanine dyes is disclosed. (3/38-51).

It would have been obvious to add a binder, a surfactant and a plasticizer to the embodiment of example 7 of Inagaki et al. '495, such that the cyanine dyes make up 1-10% of the resulting coated layer based upon the disclosure that binders are desirable additives to the recording layer within Inagaki et al. '495, Huh '588 and Tamura et al. '792, that plasticizers are desirable additives as taught by Inagaki et al. '495 and that plasticizers, and surface active agents are known to improve the stability and film forming properties of the recording layer as taught by Tamura et al. '792 and to use a primer such as a thermosetting resin to increase the adhesion and the resistance of the substrate to damage from the coating solvents based upon the direction to do so within Tamura et al. '792. Additionally, it would have been obvious to form a dual recording layer media, using the air sandwich, one recording layer coated on each side of the substrate or bonded directly together via their protective layer to double recording capacity of a single medium based upon the teachings of Inagaki et al. '495, in view of Tamura et al. '792

The applicant argues that Tamura et al. '792 teaches away from the low concentration of the dye, based upon the direction to use polymethine dyes in amounts of 40-100% of the resulting recording layer. This position neglects the fact that the specific dye being described is a cyanine dye, not the polymethine dyes of formula I-II. Furthermore, the direction to use cyanine dyes in the amount of 0.1-5% is dominated by Inagaki et al. '495, who focuses on cyanine dyes. While cyanine dyes are a type of polymethine dye, they are not bounded by formulae I or II of Tamura et al. '792 and therefore cannot be construed as teaching away. In the cases of examples 6-9, the reflectivities are 80-84%, which translates to an absorbance of approximately 11-12% and a transmittance of 88-89 for each pass through the recording layer. (remember the reflectivity is the result of the light passing through the recording layer twice, the second time after the percentage of light transmitted by the recording layer is reflected back off the reflective layer and through the recording layer a second time.) The applicant argues that the amounts taught in the references relates to the coating solution and not the final recording layer composition. **The examiner notes that the dyes content of the “fluorescent composition”, not the “information layer(s)” is described. Therefore the position, that the instant claims do not characterize the applied composition prior to drying is incorrect. The examiner also points to claim 17, which describes the dye content prior to the heating step. The optimization of the amount of dye is taught by Huh '588 and the rejection stands.**

6. Claims 11-14 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. '495, in view of Tamura et al. '792 and Huh '588, further in view of Sasakawa et al. '094.

Sasakawa et al. '094 teach the coating of optical recording media where the drying includes heating up to 100 degrees C. (8/1-3) Useful solvents are disclosed. (4/20-6/25). The use of polyvinyl chloride resins as substrate materials is disclosed. (3/7-12). The addition of soluble resins, such as ethyl cellulose, acrylic resins and various vinyl resins is disclosed. (7/1-11)

In addition to the basis provide above, the examiner holds that it would have been obvious to modify the process of over Inagaki et al. '495 combined with Tamura et al. '792 and Huh '588, by drying at 100 degrees C based upon the direction within Sasakawa et al. '094 that this is known in the art and produces useful optical recording media with a reasonable expectation of success.

The rejection stands for the reasons set forth above with the examiner holding the position that in the media of Inagaki et al. '495, the use of drying is describe dint he examples, but the conditions are not. One skilled in the art looking to practice the inventions related the teachings of Inagaki et al. '495 reasonably would be expected to search the prior art for drying processes useful with these teachings, which describe heating at temperature which do not deleteriously affect the polymeric substrates. The use of various solvents also is held to be congruent with the teachings of the other references in the heading of this rejection. The examiner notes that the discussion at 6/61-7/19 is concerned with additives to the "solution of a substituted phthalocyanine dye ..." and so clearly refers to the coating solution, not the final composition of the dye layer. The rejection stands.

7. Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. '495, in view of Tamura et al. '792 and Huh '588, further in view of Sasakawa et al. '094 and Suzuki '574.

Suzuki '574 teaches cyanine dyes such as those disclosed in column 32 as useful in optical recording media. Useful solvents include diethylene glycol (38/42-43).

In addition to the basis provided above, it would have been obvious to use other solvents, such as diethylene glycol as taught by Suzuki '574, in the invention of Inagaki et al. '495, combined with Tamura et al. '792, Huh '588 and Sasakawa et al. '094 based upon the disclosure of equivalent function.

The rejection stands for the reasons set forth above without further comment.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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9. Claims 11-24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-27 of U.S. Patent application No. 10/917384 (US prepub 2005/0013966) in view of Tamura et al. '792.

Alperovich et al. '966 claims fluorescent optical recording media containing fluorescent dyes, a polymer and a plasticizer (claims 13 and 40). The amount of dye is 0.1-10% (claim 10 and 22) and the dyes includes cyanine and oxazine dyes (claim 2). The plasticizer may be in amounts of 10-50% (13,25,27). Claims 15-20 are directed to methods of making fluorescent optical recording media. Claims 9-14 and 21-27 claim the media themselves.

It would have been obvious to one skilled in the art to add a stabilizer and a surface active agent to the claimed compositions used in the media and in the methods based upon the disclosure that these are desirable additives to the recording layer and to use a primer such as a thermosetting resin to increase the adhesion and the resistance of the substrate to damage from the coating solvents based upon the direction to do so with Tamura et al. '792. Additionally, it would have been obvious to form a dual recording layer media, using the air sandwich or bonded directly together via their protective layer to double recording capacity of a single medium.

The applicant's indicate that a terminal disclaimer may be filed at the proper time. The rejection stands.

10. Claims 21- 24 would be allowable over the prior art, if the correction of the claims to recite the transmittance as being at the wavelength of maximum **absorbance** of the fluorescent dye in the unassociated state. The prior art teaches away from this as the medium a high transmittance also describe a medium with a low absorbance which makes it relatively

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insensitive to exposure (ie most of the light is wasted as it passes through without causing any change in the recording layer).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

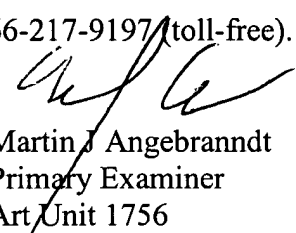
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranntdt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J. Angebranndt
Primary Examiner
Art Unit 1756

12/19/2005